THE SHERWIN-WILLIAMS COMPANY
Environmental, Health & Regulatory Services
101 Prospect Avenue NW
Cleveland, Ohio 44115-1075
Facsimile: (216) 566-2730

January 14, 2011

Mr. Ray Klimcsak
U.S. Environmental Protection Agency – Region 2
290 Broadway 19th Floor
New York, New York 10007-1866

RE: Kirkwood Lake Residential Soil Sampling Program
Technical Memorandum
Voorhees Township and Lindenwold Borough, NJ

Sherwin-Williams / Hilliards Creek Site – Kirkwood Lake
Voorhees Township and Lindenwold Borough, New Jersey
Administrative Order Index No. II CERCLA-02-99-2035

Dear Mr. Klimcsak:

The Sherwin-Williams Company (Sherwin-Williams) has reviewed the December 15, 2010 letter provided by the United States Environmental Protection Agency (EPA) regarding the Kirkwood Lake Residential Soil Sampling Program.

Previously the EPA had requested in a March 11, 2010 Comment Letter (Attachment 1) that 10 select residential properties along Kirkwood Lake be sampled as part of the Kirkwood Lake Residential Soil Sampling Program. In response to that letter, Sherwin-Williams discussed with EPA the option that all the residential properties along Kirkwood Lake be included in the Residential Soil Sampling Program, so that a complete evaluation is conducted in a single event versus a phased approach.

Based upon additional discussion between Sherwin-Williams and EPA, it was concluded that all the residential properties will be included in the sampling program. EPA provided additional comments and guidance in their December 15, 2010 Comment Letter (Attachment 2) and also requested that Sherwin-Williams prepare a Technical Memorandum for sampling all residential properties located along Kirkwood Lake. Sherwin-Williams accepts the EPA comments and is submitting this Technical Memorandum in response to this letter.

282396

Background Information

Residential soil sampling along the shoreline of Kirkwood Lake was conducted in three separate sampling events that occurred in June 2002, August 2003 and December

2003. These sampling events were conducted pursuant to the Administrative Order on Consent (AOC) Index No. II CERCLA-02-99-2037 between Sherwin-Williams and USEPA Region II Removal Action Branch.

A total of 34 properties were sampled including the access/boat launch area owned by Camden County located at the far western shore, adjacent to the lake outfall. Two to three locations were sampled at most of the properties based upon areas in which residents would most likely come in contact with the soil and the sample location's proximity to the shoreline/floodplain. A summary of the Historical Residential Soil Sampling program is presented on Figure 1.

These sampling events are summarized in the "*Kirkwood Lake Work Plan*" dated July 30, 2007, and the "*Revised Kirkwood Lake Work Plan*" dated October 24, 2007, both of which have been previously submitted to the EPA.

Scope of Work

This Technical Memorandum addresses soil sampling at all residential shoreline properties that have frontage on Kirkwood Lake. There are 37 properties that meet this criterion and they are presented on Figure 2 as well as listed on the following Table 1. *Note: All addresses are located on Kirkwood-Gibbsboro Road, also known simply as Kirkwood Road. All properties are located in Block 196.*

TABLE 1 – Properties Proposed for Residential Soil Sampling Program

Address	Lot
1108	27
1112	27.01
1116	27.02
1120	27.03
1124	3
1128	4
1132	5
1136	7
1140	8
1141	6
1144	9
1148	10
1152	11
1156	12
1160	13
1164	14
1168	15
1172	16
1176	17
1180	18
1184	19

Address	Lot
1186	20
1188	21
1192	22
1196	23
1200	24
1208	27.04
1212	28
1216	29
1220	30
1224	31
1228	32
1230	46
1240	35
1244	36
1246	38
1250	39

During June/July 2007 residential properties in the upper lobe of Kirkwood Lake (east of the berm/dam separating the main body of the lake from the smaller upstream lobe) were sampled as part of the Residential Soil Sampling Program associated with the Remedial Investigation conducted along Hilliard Creek. Six properties on Steven Drive (8, 10, 12, 14, 16 and 18) were sampled as part of this event in addition to 1260 Kirkwood Road. These properties will not be sampled as part of the Kirkwood Lake Residential Soil Sampling program outlined in this technical memorandum.

There are also a few properties that are not residential in nature or do not have frontage on Kirkwood Lake. These include the access/boat launch area owned by Camden County located at the far western shore adjacent to the lake outfall, a narrow strip of land between 1232 and 1240 that is either an access or drainage easement that is also owned by Camden County, and four residential properties (1232, 1248, 1252 and 1256) that do not have shoreline frontage.

These properties have been excluded from the Residential Soil Sampling Program and are listed on the following Table 2. *Note: All addresses are located on Kirkwood-Gibbsboro Road, also known simply as Kirkwood Road. All properties are located in Block 196.*

TABLE 2 – Properties Excluded from Residential Soil Sampling Program

Address	Lot
-(0)-	26 (Camden County)
1104	2 (Camden County)
1232	33 and 34
1248	45
1252	40
1256	41

Property Access

Sherwin-Williams will contact the property owners along Kirkwood Road requesting access to conduct soil sampling activities in accordance with the EPA-approved Technical Memorandum. Once access is obtained, Sherwin-Williams and EPA will conduct an interview with the property owner to determine their knowledge of any historical activities relating to soil movement on their property. A copy of the questionnaire to be used is included as Attachment 3.

Sample Locations

A total of five sample locations per property will be chosen by Sherwin-Williams and EPA during the property owner interview and site survey. It is anticipated that these sample locations will be biased towards the shoreline and adjacent areas that are potentially part of or in the vicinity of the floodplain.

Sample Screening, Collection and Analysis

Soil borings will be installed at each location and samples collected from the 0.0' – 0.5' and 1.5' – 2.0' intervals. Samples collected from both intervals will be sent to the laboratory for analysis for Target Analyte List (TAL) Metals only.

All sampling and analysis will be conducted pursuant to the approved Quality Assurance Project Plan (QAPP) contained within the "*Supplemental Remedial Investigation Work Plan - Sherwin-Williams / Hilliard Creek Site - Former Manufacturing Plant*" dated May 2009 and revised July 2009. Additional information regarding the analytical method, data validation and other Quality Assurance/Quality Control information (duplicate samples, equipment decontamination, etc.) may be found in the above-referenced QAPP. Please note that the existing CLP Method ILM05.4 (cited in the above-referenced QAPP) has been updated and replaced with CLP Method ISM01.2, which is the most current analytical method for metals, mercury and cyanide analyses.

The samples will be field-screened with a handheld XRF unit for arsenic and lead. Based upon the XRF results, the following field decisions will be made:

- The boring will terminate at the 1.5' – 2.0' interval if there is no evidence of impacted soils based on field observations (e.g., discolored soils) and XRF screening results indicate that arsenic (19 milligrams per kilogram [mg/kg]) and lead (400 mg/kg) are both less than their respective NJDEP Residential Direct Contact Soil Remediation Standards (RDCSRS).

- If the XRF analysis finds arsenic or lead at concentrations greater than the RDCSRS in the sample from the 1.5' – 2.0' interval, the boring will be extended an additional foot, and a sample will be collected from the 2.5' – 3.0' interval for XRF analysis. The field screening will continue at 1-foot intervals (3.5' – 4.0', 4.5' – 5.0', etc.) until the XRF analysis finds neither arsenic (19 mg/kg RDCSRS) nor lead (400 mg/kg RDCSRS) at levels greater than their respective RDCSRS.

- When the XRF screening indicates that both arsenic and lead are less than the RDCSRS, then a sample will be collected from that 1-foot interval and submitted to the laboratory for TAL Metals analysis. A sample will also be collected from the 1-foot interval immediately above the bottom interval and submitted for the same TAL metals analysis. A Soil Sampling Protocol (Figure 3) is provided for reference.

- Should an individual boring extend beyond the initial two sampling intervals, as described in the bullets above, there will be no interval spacing greater than 4 feet between samples. If this is the case (boring extends beyond 5.5' depth), then an intermediate sample will be collected for laboratory analysis for TAL metals. The intermediate sample will be selected based on field observations and/or XRF readings.

- Borings will extend to a maximum depth of 8 feet below ground surface (bgs); and will extend through the water table should it be encountered.

In backyards and areas that are accessible, a compact Geoprobe unit designed for limited access areas will be used to advance the soil borings. In backyards that are not accessible to the compact Geoprobe unit, then either hand-driven cores or hand augers will be used to collect soil samples for screening and/or laboratory analysis.

All borings will be observed and logged. If evidence of fill placement, such as brick fragments, cinders, ash, or other similar observations are noted by the field team, the boring will be extended to a depth where native soil is encountered.

Upon completion of each soil boring, the soil will be placed back into the boring. If additional soil is needed to fill the boring, then commercial top soil will be used.

Following completion of the soil sampling program, Sherwin-Williams will prepare a report summarizing the results and submit this report to EPA. The report will contain recommendations for further investigation or remedial action, as appropriate.

Should you have any questions or comments, please do not hesitate to contact me at (216) 566-1794 or via e-mail at mlcapichioni@sherwin.com.

Sincerely,

Mary Lou Capichioni

Mary Lou Capichioni
Director Remediation Services

Attachment

cc: J. Josephson, EPA (New York)
W. Sy, EPA (Edison)
L. Vogel, NJDEP (4 copies)
P. Parvis, HDR
C. Fishman – Camden County Parks Department
J. Gerulis, Sherwin-Williams (w/o enclosures)
A. Danzig, Sherwin-Williams (w/o enclosures)
S. Peticolas, Gibbons, Del Deo, Dolan, Griffinger, & Vecchione (w/o enclosures)
H. Martin, ELM
R. Mattuck, Gradient
S. Jones, Weston Solutions
S. Clough, Weston Solutions
A. Fischer, Weston Solutions

Attachment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

E.H. & R.S
MAR 15 2010

MAR 11 2010

Ms. Mary Lou Capichioni
Director
Remediation Services
Corporate Environmental Services
The Sherwin-Williams Company
101 Prospect Avenue, N.W.
Cleveland, OH 44115-1075

Re: Sherwin-Williams/Hilliards Creek Site - Kirkwood Lake
Voorhees Township and Lindenwold Borough, New Jersey
Administrative Order Index No. II CERCLA-02-99-2035
Kirkwood Lake Investigation Report - Evaluation of Sampling Results,
dated: April 30, 2009

Dear Ms. Capichioni:

The United States Environmental Protection Agency (EPA) and New Jersey Department of Environmental Protection (NJDEP) have reviewed the following document: "Kirkwood Lake Investigation Report – Evaluation of Sampling Results" (Kirkwood Lake Report), submitted by the Sherwin-Williams Company on April 30, 2009 and offers the following.

The April 30, 2009 Kirkwood Lake Report presents the cumulative sampling results for all media which were collected in association with Remedial Investigation (RI) activities at Kirkwood Lake between 2007 and 2008. In addition, the Kirkwood Lake Report also presents an assessment of the results, per media and contaminant group. Finally, Sherwin-Williams concluded the Kirkwood Lake Report by outlining several remaining field activities in order to complete the Remedial Investigation. EPA and NJDEP agree with many of the items that Sherwin-Williams has identified as field activities which remain, and they will be discussed individually in the attached comments. However, EPA and NJDEP disagree with Sherwin-Williams' conclusion that the data supports that site contaminants (particularly arsenic and lead) are not present in the coarse-grained sediments and therefore that no further sampling of the sediments is necessary.

The objective of the 2008 sediment sampling within Kirkwood Lake was to confirm, whether or not, site-related contaminants are present in the coarse-grained material. The fact that many of the samples either exceeded screening criteria (as was the case for numerous samples in which arsenic was detected), or were qualified, during data validation, as rejected ("R") data (as was the case for numerous samples for lead detections), confirms this (see Table 1 for summary of coarse-grain data).

Due to the fact that there remains sampling activities which are required to complete Remedial Investigation activities at Kirkwood Lake, EPA is including a description of the activities per media (Attachment 1). EPA is requesting that a Work Plan be developed within 30 days which outlines this work. In addition, EPA has also included comments (incorporating NJDEP's concerns as well) on the Kirkwood Lake Report (Attachment 2), which upon completion of the activities outlined in Attachment 1 and receipt of this data, should be incorporated in a later report. In other words, EPA is not requesting (at this time) that the corrections and/or revisions be made to the 2009 Kirkwood Lake Report, but at which time that the additional sampling data is received, a comprehensive report should be generated that incorporates not only the "new" data, 2007 and 2008 data, but also addresses the comments presented in Attachment 2.

Please submit a draft Work Plan for the activities outlined in Attachment 1 within 30 days of receipt of this comment letter. If you have any questions on this matter, you may contact Mr. Ray Klimcsak, at (212) 637-3916, or if you have any legal concerns, Mr. Carl Howard, Esq., at (212) 637-3216.

Sincerely yours,

Carole Petersen, Chief
New Jersey Remediation Branch

Attachments

cc: John Doyon, NJDEP

ATTACHMENT 1

Sediment

As stated earlier, EPA and NJDEP do not agree with the Report's conclusion that site-related contaminants (specifically lead and arsenic) are not present in the coarse-grained material. Table 1 summarizes the data collected within the coarse-grained material including: transect number; sample number; number of intervals sampled within the coarse-grained material; and observations. It is observed that there were numerous exceedances for arsenic within the coarse-grained material and that there were seventeen (17) samples which had lead results which were rejected ("R") during data validation. It does not however, include the number of samples at the ends of transects (typically always collected in coarse-grained sediments) that had arsenic results which either exceeded the screening criteria, or were qualified as rejected ("R") during data validation (See Table 2). In short, approximately half of the samples collected within the coarse-grained material either had exceedances for arsenic, or had data rejections for lead.

Using existing sample locations along existing Kirkwood Lake transects, EPA has outlined the samples (Table 3) which require additional delineation required within the coarse-grained sediments. EPA is requesting that the same sampling procedures (presented in the approved 2008 Kirkwood Lake Work Plan) be utilized to collect these sediment samples within the coarse-grained material. Samples should undergo analysis for: TAL Metals, grain size, total organic carbon, pH, and percent solids. In addition, XRF screening procedures should also be utilized to record arsenic and lead results. The sampling that EPA has outlined in Table 3, once completed, will bolster the usefulness of this data, where laboratory results have been rejected.

Soil

EPA concurs with the proposed soil locations (discussed in Section 4.1, page 16 of the Kirkwood Lake Report) which require additional delineation. Sample analysis and field screening methodologies should be the same as what was presented in the approved Work Plan.

Residential Sampling

Between 2002 and 2003, soil at 34 out of the 41 homes along Kirkwood Lake were sampled (it could be stated that 2 of the 41 are not in contact with the lake). During 3 different sampling events, the number of samples collected (at least 1 and up to 5) per property and the analyses performed on the samples themselves varied. Each location was sampled at the 0.0- 0.5 ft. and the 1.0 – 1.5 ft. interval. A review of the sampling results indicates that 10 of the 34 properties sampled had at least one exceedance for either lead or arsenic. A closer look at the data reveals

that, 6 of the properties had an exceedance at the surface only; 1 had only a subsurface exceedance; and 3 had an exeedance for both intervals. Arsenic concentrations ranged from 20.6 to 49.9 parts per million (ppm) at the surface and 47.8 to 60.2 ppm at the subsurface. Lead concentrations ranged from 455 to 1,280 ppm at the surface and 668 to 2,800 ppm at the subsurface.

EPA is requesting that all 10 properties which exhibited an exccedance (1136, 1148, 1152, 1156, 1186, 1188, 1192, 1200, 1212, and 1250) be re-sampled. In addition, EPA is requesting that the following properties: 1108, 1184, and 1208 be sampled because they were not previously sampled and are adjacent to properties which exhibited exceedances. Finally, EPA is requesting that the following properties also be sampled: 1144 and 1232 (all of which had samples that were collected at distances away from the shoreline), the residential property (which is not numbered) but is located between property 1232 and 1240 in Figure 3 of the June 2007 "Removal Action Addendum Report – Kirkwood Lake Sampling Program Hilliard Creek Site" submitted to EPA Removal Program by the Sherwin-Williams Company, and 1240 (3 samples along shoreline, but no samples collected within the cove area).

The sampling procedures at these properties should be consistent with the approved methodologies and procedures used at other residential properties during RI activities. Each property should have 10 locations sampled (each having two intervals), interviews should be performed with the property owners to see if sediments and/or soil has been moved (spread) about the property. The analytical parameters should include: TAL metals, PCBs and PAHs.

EPA may request additional residential sampling at a later time.

Evaluation of Background Conditions

EPA, at this time, is not requesting additional evaluation of potential background conditions/ sources in, or in the vicinity of, Kirkwood Lake soils and sediments.

Additional Filtered Surface Water Samples

At this time, EPA is not requesting that additional surface water samples be collected.

Additional Pore-Water Sampling

NJDEP Comment - This section within the Kirkwood Lake Report contains a description of the pore water samples that were attempted. The attempts were not successful in that the total dissolved solids made the metals content of the samples difficult to interpret. The report goes on

to state that additional pore water data may be needed. The NJDEP recommends that Sherwin-Williams install a shallow monitoring well across the first water table at a location between White Horse Road and samples KWSB0014 and KWSB0015. Using a low flow sampling technique, this well should be able to discern any metals leaching into groundwater from contaminated sediment, and aid in determining the bioavailability of the metals.

Benthic Survey and/or Toxicity Testing

The approved RI/FS Work Plan states that a screening-level ecological risk assessment (SLERA) will be prepared and that a baseline ecological risk assessment (BERA) may be conducted if necessary. However, at this time EPA is requesting that a preliminary habitat assessment and a wetlands delineation (report) be conducted for Kirkwood Lake. Kirkwood Lake was not included in the August 28, 2009 *Preliminary Habitat Assessment Report* nor the June 2, 2009 *Wetland Delineation Technical Memorandum*, both submitted to EPA by the Sherwin-Williams Company.

Post dam-maintenance (work) sampling below the Kirkwood Lake dam

At the most recent briefing with Voorhees Township (town council and environmental commission members) it was remarked that turbid water was noticed flowing downstream during Kirkwood Lake dam-maintenance activities. EPA is requesting that Sherwin-Williams submit a proposal to collect several samples (soil and sediments) at points immediately below the dam and at points 50, 100, and 150 ft. downstream of the outflow.

ATTACHMENT 2

General Comments

1. The specific comments below should be addressed, in a revised evaluation report, once the field activities outlined in Attachment 1 are completed.

2. Overall, additional detail is required in the report for the following items and/or activities: lake profiling activities (methodology utilized to determine the depth of the fine-grained sediments); collocated XRF screening results; coarse-grain sediment sample locations from which the Vibracore™ or "suction-sampler" was used;

Specific Comments:

1. Figures 3A and 3B should include the transect names (KWT-#) parallel to the respective transect number.

2. Figures 4A through 4D, an appropriate indicator (such as a shaded line) should be used to indicate that the depths of the lake's sediment bottom (depicted on the figure) are approximate between sample locations, along with a statement that they are approximated and are being extrapolated.

3. First paragraph, it is stated that the Sherwin-Williams sites are located in Gibbsboro, but later the same sentence states that Kirkwood Lake is located in Voorhees and Lindenwold, so for an unfamiliar reader, this is confusing.

4. Please correct the spelling of Carole Petersen's name (incorrectly spelled on Page 2).

5. Section 2.0 Screening Criteria, page 2 – EPA is requesting that the terminology "phase(s)" be used to reference the different sampling events which occurred at Kirkwood Lake during the RI. Please note, the term "phases" was used on page 1, yet on page 2 the term "second sampling event" is used. Later on page 2, the term "initial sediment sampling results" is used. In addition, the last sentence of page two appears to reference the use of the XRF (field screening tool), if this is the case, please state as such.

6. Page 3, 2nd bullet. The report was authored in April of 2009. The freshwater sediment criteria referenced are said to have been published in July of 2008. The most recent NJDEP ecological screening criteria, including those for freshwater sediment, are dated March 10, 2009. The latest published screening criteria pre-date the authoring of the report so these should be referenced rather than the July 2008 screening criteria.

7. Page 4, first full sentence – Clarification of the following statement is needed: "descriptors were based upon the field team's ability to penetrate the sediments". Please provide the tools or field methodologies which were used.

8. Page 6, last bullet. Should include sentence that additional 3-foot core was advanced in order to continue XRF screening beyond the 2.5-3 ft interval.

9. Section 3.2 Sediment Investigation Results, page 7 – First bullet, last sentence should be corrected to state that, "Only the arsenic and lead analytical results greater than the NJDEP LELs are shown on Figure 2.

10. Page 11, 3rd paragraph. The "statewide background concentration" of arsenic should be provided in the text (19 mg/kg) as well as the "range of natural background concentrations" for chromium.

11. Section 5 – Surface Water, 2nd paragraph from bottom of page. If turbidity is suspected to have caused the elevated lead concentration in surface water sample KWDW0010, other metals such as iron, magnesium and manganese would be expected to have been elevated in that sample as well which is not the case. Provide the turbidity field measurements for the surface water samples in the text or in the appendices to support this assumption.

12. The text and the figures incorrectly represent the road that extends over the stream at the Western end of Kirkwood Lake as the White Horse Pike. This is actually the White Horse Road and may cause some confusion since the "White Horse Pike" is actually several hundred feet to the south of Kirkwood Lake but never traverses the lake or the stream. Future references should use the correct street name.

Table 1

Represents samples within the coarse-grained sediments with at least 6 inches of fine-grained sediments above them, or second interval in cases where there was no fine-grained material at the 0-6"

Kirkwood Lake Transect Number	Kirkwood Lake Sediment Sample Number	Observations In Coarse-grained sediments
KWT-1	KWDD0112	Arsenic exceeded criteria in four intervals, no lead exceedances. (5 intervals sampled)
KWT-2	KWDD0004	No arsenic or lead exceedances. (1 interval sampled)
KWT-6	KWDD0012	No arsenic or lead exceedances. (1 interval sampled)
KWT-10	KWDD0018	Arsenic exceeded criteria in first interval. Lead results were rejected ("R") in two others. (2 intervals sampled)
KWT-15	KWDD0022	No arsenic exceedance, but lead result was rejected ("R"). (1 interval sampled)
	KWDD0024	Arsenic excceded criteria in three intervals. Lead exceedance in one. (3 intervals sampled)
KWT-20	KWDD0025	No arsenic exceedance, lead result was rejected ("R"). (1 interval sampled)
	KWDD0028	Arsenic result exceeded criteria, lead result was rejected ("R"). (1 interval sampled)
KWT-23	KWDD0032	Arsenic did not exceed criteria, but lead result was rejected ("R"). (1 interval sampled)
	KWDD0036	Arsenic exceeded criteria in two intervals, lead was rejected ("R") in all three. (3 intervals sampled)
KWT-29	KWDD0038	Arsenic exceeded criteria in 6 intervals, lead was rejected ("R"). (8 intervals sampled)

	KWDD0041	Arsenic did not exceed criteria, but lead result was rejected ("R"). (1 interval sampled).
KWT-35	KWDD0043	No arsenic or lead exceedances. (1 interval sampled)
	KWDD0048	Arsenic did not exceed criteria, but lead result was rejected ("R"). (1 interval sampled).
KWT-40	KWDD0055	No arsenic or lead exceedances. (1 interval sampled)
KWT-46	KWDD0060	No arsenic or lead exceedances. (1 interval sampled)
	KWDD0065	No arsenic or lead exceedances. (1 interval sampled)
KWT-50	KWDD0069	No arsenic or lead exceedances. (1 interval sampled)
	KWDD0073	No arsenic or lead exceedances. (1 interval sampled)
KWT-54	KWDD0080	No arsenic or lead exceedances. (1 interval sampled)
KWT-58	KWDD0089	Arsenic exceeded criteria, lead was just below. (1 interval sampled)
KWT-62	KWDD0093	Arsenic exceeded in one interval, no lead exceedances in other two. (2 intervals sampled)
	KWDD0097	No arsenic or lead exceedances. (1 interval sampled)
KWT-66	KWDD0101	No arsenic or lead exceedances. (2 intervals sampled)
KWT-70	KWDD0104	No arsenic or lead exceedances. (1 interval sampled)
	KWDD0106	No arsenic or lead exceedances. (1 interval sampled)

Table 2

Samples collected at the end of transects, always within the coarse-grain sediments

Kirkwood Lake Transect Number	Kirkwood Lake Sediment Sample Number	Observations In Coarse-grained sediments
KWT-1	KWDD0001	Arsenic exceedance
KWT-2	KWDD0003	Arsenic exceedance
KWT-10	KWDD0015	Arsenic exceedance
KWT-15	KWDD0024*	Arsenic exceedance
KWT-20	KWDD0025	Arsenic exceedance
KWT-23	KWDD0036*	Arsenic exceedance
KWT-35	KWDD0043	Arsenic exceedance
KWT-50	KWDD0067	Arsenic exceedance
KWT-58	KWDD0092*	Arsenic exceedance
KWT-62	KWDD0093	Arsenic exceedance
	KWDD0098**	Arsenic value rejected ("R")
KWT-66	KWDD0099	Arsenic value rejected ("R")
	KWDD0103**	Arsenic value rejected ("R")
KWT-70	KWDD0104	Arsenic value rejected ("R")
	KWDD0107**	Arsenic value rejected ("R")

*Sample at end of transect is adjacent to residential property, with exceedance.

**Sample at end of transect is adjacent to residential property, with a value "R".

Table 3

Kirkwood Lake Sediment Sample Locations Selected for Additional Vertical Delineation

Kirkwood Lake Transect Number	Kirkwood Lake Sediment Sample Number
KWT-1	KWDD0001
KWT-2	KWDD0006
KWT-6	KWDD0011
KWT-10	KWDD0015
KWT-15	KWDD0021
KWT-20	KWDD0027
KWT-23	KWDD0034
KWT-29	KWDD0040
KWT-35	KWDD0045 KWDD0049
KWT-40	KWDD0054
KWT-46	none
KWT-50	none
KWT-54	KWDD0084
KWT-58	KWDD0089 KWDD0092
KWT-62	KWDD0094 KWDD0098
KWT-66	KWDD0100
KWT-70	none

Attachment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

EH & RS
DEC 20 2010

DEC 15 2010

Ms. Mary Lou Capichioni
Director
Remediation Services
Corporate Environmental Services
The Sherwin-Williams Company
101 Prospect Avenue, N.W.
Cleveland, OH 44115-1075

Re: Sherwin-Williams/Hilliards Creek Site - Kirkwood Lake
Voorhees Township and Lindenwold Borough, New Jersey
Administrative Order Index No. II CERCLA-02-99-2035
Kirkwood Lake Residential Soil Sampling Program

Dear Ms. Capichioni:

In a March 11, 2010 letter, The United States Environmental Protection Agency (EPA) and New Jersey Department of Environmental Protection (NJDEP) requested that 10 (select) residential properties (based on historic sampling events) be either re-sampled, or sampled (as not having been sampled historically). Since this request, through discussions between all parties, there have been proposed revisions to the initial sampling request. Presented below, is a summary of the field activities which EPA is requesting to be included in the future sampling activities for the residential properties in contact with Kirkwood Lake.

Kirkwood Lake – Residential (Soil) Sampling Program Components:

- Five (5) locations per property (in contact with Kirkwood Lake) are to be sampled. The depths to be sampled are to be consistent with protocols previously utilized at other residential properties under the on-going Remedial Investigation (RI) activities and would include: surface (0.0 – 0.5 ft.) and sub-surface (1.5 – 2.0 ft.).

- All samples are to be analyzed for TAL Metals.

- EPA is requesting the use of the X-Ray Fluorescence (XRF) during this sampling effort, specifically on the sub-surface interval. The data that is obtained should be used to decide if additional vertical delineation is necessary. The request is based on two factors. One, the previous sampling (2002 and 2003) at residential properties along Kirkwood Lake revealed that it was often the "deeper" interval that had the higher lead or arsenic result. Therefore, with the use of the XRF, the depth of contamination can be delineated. Second, although the XRF was not utilized during previous sampling of residential properties along Hilliards Creek (2007), soil samples were collected at depth (from

Hilliard Creek Transect – Soil Samples) on residential properties or within the direct vicinity. During which time, the XRF was used, and locations were delineated vertically (thus providing an approximate depth to which contamination exists).

Please submit a Technical Memorandum within 30 days of receipt of this comment letter. If you have any questions on this matter, you may contact Mr. Ray Klimcsak, at (212) 637-3916, or if you have any legal concerns, Mr. Carl Howard, Esq., at (212) 637-3216.

Sincerely yours,

Carole Petersen, Chief
New Jersey Remediation Branch

cc: Lynn Vogel, NJDEP

Attachment

SHERWIN-WILLIAMS.

WESTON SOLUTIONS

PROPERTY OWNER SURVEY / QUESTIONNAIRE

PROPERTY OWNER:	**DATE:**
RESIDENCE ADDRESS:	**INTERVIEWER:**

1. How long have you owned or rented the property in question?

2. During the period you have owned your property, have you observed any discolored soils, stressed vegetation or any unusual odors?

3. Has there been any sampling conducted at the property?

4. If so, who conducted the sampling, for what purposes was this conducted and are the sample results available?

5. Has there been any remedial, construction, landscaping, clearing or any other earth disturbing activities conducted at the property?

6. Can you provide the details of any earth disturbing activities described above if any were conducted, and provide any maps, drawings or design plans if available?

SHERWIN-WILLIAMS.

WESTON SOLUTIONS

PROPERTY OWNER SURVEY / QUESTIONNAIRE

PROPERTY OWNER:	**DATE:**
RESIDENCE ADDRESS:	**INTERVIEWER:**

7. If any earth moving activities were conducted at the property, was anything unusual discovered such as empty containers, discolored soils, or foul odors?

8. Has any additional soil/fill been introduced to the property or any low-lying area filled?

9. Have any structures been established on the property (i.e. new deck or shed) or any extension added to the home?

10. Are there any plans to conduct any landscaping, tree removal, extensions, and/or other construction activities in the near or distant future at the property?

11. Other notes/comments:

Figures

Legend

- June 2002 Sampling Round
- August 2003 Sampling Round
- December 2003 Sampling Round
- Samples Not Collected / Access Not Granted
- 1216 Kirkwood-Gibbsboro Road Street Address

NOTE:
1. 1228, 1230, and 1232 owned by same person. 1228 and 1230 historically sampled as 1232.

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Weston Solutions, Inc.
205 Campus Drive Edison, New Jersey 08837-3939
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SHERWIN WILLIAMS — COVER THE EARTH

REPORT DATE: January 2011	PROJECT MANAGER: S. Jones	CLIENT NAME: The Sherwin-Williams Company	DRAWING TITLE: KIRKWOOD LAKE HISTORICAL RESIDENTIAL SOIL SAMPLING PROGRAM
DRAWING: PATH: 08846_KWL_Historic_Sample_LB.mxd L:/SHERWIN/GIS/MXD/2011_01_KWL	CHECKED BY: A. Fischer		
REVISION No. 0	CONTRACT No. DELIVERY ORDER NO.	PROJECT NAME: Sherwin-Williams Remedial Investigation	
WORK ORDER No. 20076.022.080.0005	DRAWN/MODIFIED BY: J. Lynes DATE CREATED: 01/10/2011		FIGURE: 1 · SCALE: 1" = 120' · DATE: 01/10/2011

Legend

Block and Lot Boundary

Street Address
#: 1132
BLOCK: 196
LOT: 5
Block Number
Lot Number

NOTE:
1. 1228, 1230, and 1232 owned by same person. 1232 and 1230 historically sampled as 1232.

SOURCE:
1. 2007 - 2008 High Resolution Orthophotography. NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS). October 2008. http://njgin.nj.gov/OIT_IW/index.jsp

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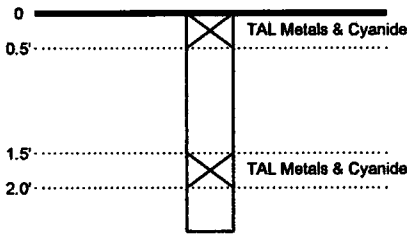
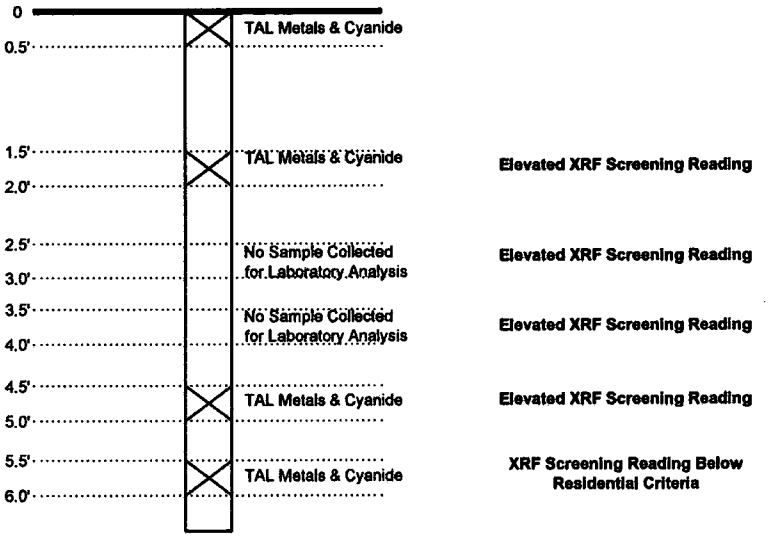
REPORT DATE: January 2011	PROJECT MANAGER: S. Jones	CLIENT NAME: The Sherwin-Williams Company	DRAWING TITLE: KIRKWOOD LAKE PROPOSED RESIDENTIAL SOIL SAMPLING PROGRAM
DRAWING: PATH: 08847_KWL_LB.mxd L:/SHERWIN/GIS/MXD/2011_01_KWL	CHECKED BY: A. Fischer		
REVISION No. 0	CONTRACT No. DELIVERY ORDER NO.	PROJECT NAME: Sherwin-Williams Remedial Investigation	
WORK ORDER No. 20076.022.080.0005	DRAWN/MODIFIED BY: J. Lynes DATE CREATED: 01/10/2011		FIGURE: 2 / SCALE: 1" = 120' / DATE: 01/10/2011

Soil Sampling Protocol

Typical Sampling Interval
Based on No Remarkable Observations
No XRF Exceedances



Typical Sampling Interval
Based on Elevated Field Screening
Results and Observations



Notes:

1. All samples submitted to laboratory will be analyzed for TAL Metals plus Cyanide.
2. The sample immediately above the bottom interval at which field screening and observations indicate no contamination will be submitted for TAL Metals plus Cyanide.
3. The sample from the bottom interval at which field screening and observations indicate no contamination will be submitted for TAL Metals plus Cyanide.
4. If there is greater than a 4-foot interval between the 1.5-2.0 foot sample interval and the sample interval immediately above the bottom interval, then an intermediate sample will be selected for laboratory analysis based upon either the highest XRF reading and/or visual observations.

LEGEND:
⊠ - Sample collected and submitted for laboratory analysis

TITLE:
Soil Sampling Protocol
Kirkwood Lake Residential Soil Sampling Program

PROJECT:
Kirkwood Lake Residential Soil Sampling Program

CLIENT NAME:
The Sherwin-Williams Company

WESTON

DATE:
Jan. 11, 2011

FIGURE #:
3

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